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(un-13)
compressibility of the annular upturned edge, and the sealing end cooperating with the propeller shaft to provide a seal therewith.

REMARKS:

Claims 1, 8, and 11 have been amended. Claims 1-4 and 8-13 remain in the application.

The drawings were objected to under 37 C.F.R. §1.83(a). The applicant respectfully submits that the claims already show every feature of the invention specified in the claims. Specifically, the sealing end is shown generally at numeral 44 in the figures. Furthermore, the annular upturned edge is generally shown at reference numeral 50 in the figures. Therefore, it is respectfully submitted that the drawings overcome the objection to the drawings under 37 C.F.R. §1.83(a) and it is respectfully requested that the objection be removed.

The disclosure was objected to because of informalities. The applicant has carefully examined the specification and has found no spelling errors therefore, it is respectfully submitted that the disclosure overcomes the objection because of informalities and it is respectfully requested that the objection be removed.

The specification was objected to as failing to provide proper antecedent basis for the claimed subject matter. Applicant respectfully submits that the specification provides proper antecedent matter for "a boot is non-convoluted" at page 8, line 23. The specification provides proper antecedent basis for "annular upturned member" and an "annular upturned edge" at page 8, line 25 and page 9, lines 3-7. The specification provides proper antecedent basis for "the annular upturned edge having a plurality of radially distributed apertures" at page 10, lines 8-13. Therefore, it is respectfully submitted that the specification overcomes the objection for failing to provide proper antecedent basis for claimed subject matter and it is respectfully requested that the objection be removed.

Claim 11 was objected to because of informalities. Claim 11 has been amended to remove the informalities. Therefore, it is respectfully submitted that claim 11 overcomes the objection for informalities and it is respectfully requested that the objection be removed.

Claims 1-4 and 8-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sugiura, et al, 5,707,066 in view of Welschof, et al 4,747,805. Applicant respectfully traverses this rejection.

U.S. Patent 5,707,066 to Sugiura, et al discloses a boot assembly with adapter.

U.S. Patent 4,747,805 to Welschof, et al discloses a protective boot assembly for constant velocity universal joint.

In contradistinction, claim 1, as amended, claims a constant velocity universal joint boot including a crimping lip, the crimping lip having a plurality of radially distributed apertures which are oriented parallel to the longitudinal axis and are approximately 35% to 70% of the crimping lip thickness for reducing the stiffness and increasing the compressibility of the crimping lip. Sugiura, et al alone or in combination with Welschof, et al does not disclose, teach suggest or even contemplate the present invention as claimed in amended claim 1. In particular, neither Sugiura, et al or Welschof, et al discloses, teaches or even suggests a constant velocity universal joint boot having a crimping lip wherein that crimping lip has a plurality of radially distributed apertures which are oriented parallel to the longitudinal axis and are approximately 35% to 70% of the crimping lip thickness for reducing the stiffness and increasing the compressibility of the crimping lip. Nowhere in Sugiura, et al or Welschof, et al is it taught, suggested or even contemplated to have a plurality of radially distributed apertures that are approximately 35% to 70% of the crimping lip thickness for reducing the stiffness and increasing the compressibility of the crimping lip of a constant velocity universal joint boot. As neither

reference suggests, teaches or even contemplates the use of such sized apertures a combination of Sugiura, et al and Welschof, et al would not produce the invention of the applicant as claimed in amended claim 1. Therefore, as no teaching, suggestion or even contemplation is found in either reference for use of the above-described apertures the combination of Sugiura, et al and Welschof, et al must fail. Therefore, it is respectfully submitted that claim 1, and the claims dependent therefrom, overcome the rejection under 35 U.S.C. §103(a) and are allowable over this rejection.

Claim 8, as amended, claims a constant velocity universal joint assembly having a non-convoluted thermoplastic rolling-diaphragm boot with a crimping lip. The crimping lip having a plurality of radially distributed apertures for increasing the compressibility of the crimping lip such that the crimping lip has a compressed thickness ratio approximately 50% to 70% of an uncompressed crimping lip thickness.

Sugiura, et al alone or in combination with Welschof, et al does not disclose, teach or suggest the present invention as claimed in claim 8, as amended. In particular, neither Sugiura, et al or Welschof, et al discloses, teaches, suggests or even contemplates a constant velocity universal joint assembly having a non-convoluted thermoplastic rolling-diaphragm boot with a crimping lip wherein the crimping lip has a plurality of radially distributed apertures for increasing the compressibility of the crimping lip such that the crimping lip has a compressed thickness ratio of approximately 50% to 70% of an uncompressed crimping lip thickness. Nowhere does Sugiura, et al or Welschof, et al contemplate, suggest or even teach the use of a crimping lip with a compressed thickness ratio of approximately 50% to 70% of an uncompressed crimping lip thickness. In fact neither reference even discusses a thickness ratio in comparison between a compressed and uncompressed crimping lip. Hence, a combination of

Sugiura, et al and Welschhof, et al would not and could not yield applicant's invention as claimed in amended claim 8. Therefore, it is respectfully submitted that claim 8, and the claims dependent therefrom, overcome the rejection under 35 U.S.C. §103(a) and are allowable over this rejection.

Claim 11, as amended, claims a constant velocity universal joint and propeller shaft assembly having a non-convoluted thermoplastic boot having an annular upturned edge having a plurality of radially distributed apertures on a radially inward facing surface for increasing the compressibility of the annular upturned edge.

Sugiura, et al and Welschhof, et al alone or in combination with each other do not disclose, teach, or suggest the present invention as claimed in amended claim 11. In particular, neither Sugiura, et al or Welschhof, et al discloses, teaches or even suggests a constant velocity universal joint and propeller shaft assembly having a non-convoluted thermoplastic boot, wherein that boot has an annular upturned edge having a plurality of radially distributed apertures on a radially inward facing surface. Nowhere does Sugiura, et al or Welschhof, et al describe, teach or even contemplate radially distributed apertures on a radially inward facing surface of an annular upturned edge. Therefore, as neither Sugiura, et al or Welschhof, et al suggest, teach or even contemplate such a feature it is not possible for a combination of Sugiura, et al and Welschhof, et al to include such a feature therein. Therefore, the combination of Sugiura, et al and Welschhof, et al would not and could not create a constant velocity universal joint and propeller shaft assembly as claimed by applicant in amended claim 11. Therefore, it is respectfully submitted that claim 11, as amended, and the claims dependent therefrom overcome the rejection under 35 U.S.C. §103(a) and are allowable over this rejection.

If applicant may be of any further assistance or provide any other information in the prosecution of this application, the Examiner is requested to call the undersigned at (248) 377-1290.

Respectfully submitted,

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Marked Up Version of Claims:

1. (THRICE AMENDED) A constant velocity universal joint boot comprising:
at one end, a cylindrical neck member for receiving a shaft; and
at the other end, an annular upturned member defining a longitudinal axis and including a crimping lip, said crimping lip having a plurality of radially distributed apertures which are oriented parallel to said longitudinal axis and are approximately 30% to 70% of said crimping lip thickness for reducing the stiffness and increasing the compressibility of said crimping lip, wherein said boot is non-convoluted.

8. (THRICE AMENDED) A constant velocity universal joint assembly comprising:
a constant velocity universal joint having an outer race;
a boot-can having a first end for mating with said outer race annular housing and a second flanged end spaced apart from said first end and said outer race; and
a non-convoluted thermoplastic rolling-diaphragm boot having a crimping lip received by the second flanged end of said boot-can, the crimping lip having a plurality of radially distributed apertures for increasing the compressibility of the crimping lip such that said crimping lip has a compressed thickness ratio approximately 50% to 70% of an uncompressed crimping lip thickness.

11. (TWICE AMENDED) A constant velocity universal joint and propeller shaft assembly comprising:
a propeller shaft having a first end;

a constant velocity universal joint for receiving the first end of the propeller shaft and including an outer race having a first face;

a boot-can having a large-diameter end and a small[er]-diameter flanged end, the large[r]-diameter end for mating with the first face of the outer race; and

a non-convoluted thermoplastic boot having a sealing end, said sealing end having a tubular stem portion for receiving the propeller shaft, and an annular upturned edge crimpingly affixed to the smaller-diameter flanged end of the boot-can, the annular upturned edge having a plurality of radially distributed apertures on a radially inward facing surface for increasing the compressibility of the annular upturned edge, and the sealing end cooperating with the propeller shaft to provide a seal therewith.